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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/613,418	07/10/2000	Michael G. Mayer	85773-227	9352
26123	7590	08/11/2005	EXAMINER	
BORDEN LADNER GERVAIS LLP			SEFCHECK, GREGORY B	
WORLD EXCHANGE PLAZA			ART UNIT	
100 QUEEN STREET SUITE 1100			PAPER NUMBER	
OTTAWA, ON K1P 1J9			2662	
CANADA			DATE MAILED: 08/11/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/613,418	MAYER, MICHAEL G.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gregory B. Sefcheck	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

- Applicant's Amendment filed 6/7/2005 is acknowledged
- Claims 1-7 and 10-16 remain pending.

### ***Drawings***

1. The replacement drawing of Fig. 2 received on 6/7/2005 is acceptable. The previous objection is withdrawn.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 5,563,891) in view of Bowen et al. (US 6,385,267), hereafter Bowen.

- In regards to Claim 1, 7, 10, and 16,

Wang discloses a synchronizer and method thereof comprising an input for receiving a digital signal and a data recovery unit (element 110 and input signal) that recovers a first clock signal from the received signal indicative of the signal's transmission rate (Fig. 6; Col. 8, line 33; Fig. 6, element 110; claim 1, 10, 16 -

synchronizer and method thereof comprising input of arbitrary rate and a data/clock recovery unit).

Wang shows that the recovered first clock signal is used to generate a second clock signal indicative of an allowable transmission rate of the network (Col. 8, lines 43-57; Col. 10, lines 15-19; Fig. 6, elements 115, 130, 135, 140, 145 and 155; claim 1,10,16 - clock generator coupled to clock recovery for generating second clock indicative of network line transmission rate).

Wang further discloses a mapping unit (elements 120 and 150) that receives the second clock signal and maps the data into a frame structure at the network transmission rate and outputs the signal to the network (Col. 1, lines 44-45; claim 1,10,16 – mapping the stream into a frame output at the rate of the second clock).

Wang does not explicitly disclose a clock generator performing frequency multiplication of the first clock on a first input and a control signal on a second input for generating a second clock.

Bowen discloses a clock generator that generates a second clock signal based on a frequency multiplication of a first clock signal and an adjustment (control) signal (Figs. 1 and 2; Col. 2, lines 45-58; Col. 6, lines 12-23; claim 1,10,16 – second clock generated by frequency multiplication of the first clock signal; claim 7 - clock generator has multiplier).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and synchronizer of Wang by generating a second clock signal based on a frequency multiplication of a first clock signal and a control signal, as

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shown by Bowen. This modification provides a correlation between the first and second clock signals so that the integrity of the data can be maintained at the different clock rates while the use of such a control signal enables marginal increases and/or decreases in the generated clock when necessary (Bowen; Col. 2, lines 55-57).

- In regards to Claims 2-5 and 11-14,

Wang discloses a synchronizer and method that covers all limitations of the parent claims.

Wang discloses applicability of the synchronizer and method in communications networks such as data networks, which encompasses asynchronous optical and electrical networks (Col. 1, lines 18-20; claim 2,11 – network is optical; claim 3,12 - async optical; claim 4,13 - electrical; claim 5,14 - async electrical).

- In regards to Claim 6 and 15,

Wang discloses a synchronizer and method that covers all limitations of the parent claims.

Wang shows a synchronizer and method thereof in which data within a frame are put into payload and stuffing bit positions of an appropriate time-slot assignment (Col. 10, lines 22-25; claim 6,15 - distribute data through time slots and stuff bits).

***Response to Arguments***

4. Applicant's arguments filed 6/7/2005 have been fully considered but they are not persuasive.

- In the Remarks on pgs. 3-4 of the Amendment, the Applicant contends that Wang does not disclose a synchronizer in which the input signal from which a first data clock signal is recovered is not indicative of an arbitrary transmission rate. Applicant further contends that Wang does not disclose generation of a second clock signal that is indicative of a line transmission rate that falls within the range of allowable transmission rates for the network and mapping the input signal into at least one frame at a rate indicated by the second clock signal.
- The Examiner respectfully disagrees. In the Abstract, Wang discloses that the input data signal is a "lower rate signal that is plesiochronous with a higher rate signal into which the lower rate signal is to be multiplexed". By way of example, Wang illustrates the operation of the synchronizer and method by using specific rates in a telephone network, but clearly states that the invention is equally applicable to other communication networks, and therefore, differing input rates (Col. 1, lines 17-20). It is the opinion of the Examiner that this input "lower rate" is arbitrary, since the synchronizer and method of Wang would perform equally for differing input rates of different network types. Furthermore, Wang shows the input "lower rate" signal is

mapped into a signal based on a generated second clock signal that is synchronized to the higher rate signal used for transmission over the network (Col. 8, lines 43-57). Therefore, it is the opinion of the Examiner that Wang shows generation of a second clock indicative of an allowable transmission rate for the network and mapping the input data into at least one frame at a rate indicative of the generated second clock signal.

- In the Remarks on pgs. 5-6 of the Amendment, the Applicant contends that the rejection fails to establish a prima-facie case against the claims. Specifically, Applicant contends Bowen is not directed to the problem solved by the present invention. Applicant further contends that no proper motivation to combine Wang and Bowen has been established.
- The Examiner respectfully disagrees. Both Wang and Bowen pertain to synchronizing of signals. The full disclosure of Bowen is not cited as required for meeting the limitations of the claims by the Examiner. Rather, the disclosure of Bowen regarding generation of a second clock through the use of frequency multiplication with a first clock and a control signal is relied upon to meet the missing limitations of Wang. The clock generation of Bowen, as shown in the rejection, enables marginal adjustment of the target frequency through use of a control signal, which could provide the synchronizer of Wang with the ability to adapt to variations in the network.

***Conclusion***

**5. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS  
8-8-2005



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